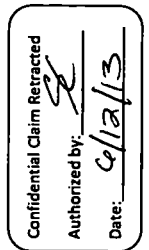


The following are comments derived from reviewing the "Revegetation Success Criteria" submitted by Anaconda as an Amendment to the March 1982 Green Plan.

Item I.B. and I.C.3.

It is referenced that soils data will be used for selection of reference areas for success evaluations, primarily soil depth and soil texture. It is not mentioned in the rest of the context. If such is the case, will a soils inventory be taken in the vicinity of the reference areas? A map will need to be submitted denoting cross reference or reference areas to revegetated areas and other selection criteria.



Item II.C.2. Sampling

Due to the fact that unit areas have not yet been outlined and the size of said units is unknown, a maximum number of samples should not be set. Sample adequacy is also based on the uniformity of sample. If uniformity is not met with 50 samples more samples will have to be taken. What method will be used to determine sample adequacy?

III.D.1. Sampling Period

It is stated that..."Revegetated area will be sampled the third year after the last seeding or reseeding effort..."

Does this infer that, if the last seeding occurs in 1985 that evaluation success will not occur until 1988? If a site is deemed a failure in 1988, will the area be reseeded with other additional treatments and then evaluated another three years later?

The phrase "last seeding or reseeding" needs differentiation. I translate this to mean that previously reclaimed dumps or dumps showing poor emergence will be reseeded with the approved mix and "last seeding" meaning sites receiving first treatment.



III. Selection Criteria

9384214

The determination of Successful Revegetation from a weighted average basis does not seem to justify the use of 70% as a criteria for site success for the

following reason:

An excellent basal cover or production of the flat areas (slopes less than 5.1) will easily offset any poor cover on the slopes, if 70% is to be used to measure success. The greater the percentage of flat area with good success the easier it will be to offset poor slope vegetal success. Stabilization of the slopes is probably one of the most important criteria. If poor slope cover is offset by flat surface cover, the goals of stabilization will not be accomplished.

It is my recommendation that monitoring be accomplished on each of their previously mentioned criteria of slope, aspect and soils. This is recommended for the following reasons:

- slope area is usually less than flat areas, however, data is needed to evaluate each area.
- South and West aspects usually have less cover and are more difficult to establish than North and East slopes. Poor slopes will continually be offset by better production on North and East slopes and the flat areas.
- vegetative success on slopes steeper than 3.1 will usually be difficult to initiate growth upon.

Most of the natural slopes in the area are overlain with rock cover which aids in the stabilization of these slopes. No plans have indicated that any of the revegetated slopes will be accommodated with rock cover. Vegetation on these rocky slopes can be minimal and still provide for adequate stabilization.

What justification in analysis will mitigate the comparison of rock and vegetative cover on natural slopes versus revegetated slopes with no other methods of stabilization but vegetation.

Although the 70% level is proposed by Anaconda, their determination to leave dump slopes at the angle or repose will jeopardize potential success on these slopes.

To date, no data has been submitted on which waste slopes were seeded and monitored on a large scale.

. The fact that no substantial data has been collected on the success of slope vegetation (especially on the steep slopes of the reclaimed dumps) indicates that the proposed formula is hypothetical and has not been used in actual practice.

Previously reclaimed dumps have slopes that have not been not been reseeded although some exhibit some voluntary growth. These dumps will also need to be monitored, inspected and approved.

The report by the Ludeke Corporation does not back up the proposed formula by any mention in its text. The report only evaluates the vegetation trend for dump surface tops and success at 70%.

How will shrub production be measured? Basal cover on these plants is usually minimal. Forage production should be measured only on the current years growth.

Anaconda repeatedly mentions that any site which receives premature grazing will be deemed successful. What steps will Anaconda take to protect these areas from grazing? The majority of the reservation is open range grazing. It would seem that the responsibility for any fencing or security for prevention would lie with Anaconda. Will the reference areas also be protected?

The slope aspect delineation proposed by Anaconda slope to differentiate growth potentials are in order and insure monitoring of areas vital to future stability of the minesite.

Page two of the September 9, 1983, letter from W. Norem to Mike Pool quotes 25 CFR §216 regarding evaluation of vegetal cover. Anaconda does not state that it is the Agency Superintendent or other officer of the BIA who makes this evaluation. It is also the Superintendent who determines if satisfactory growth has been established. Copies of 25 §216.9C(2) are attached for your review. Are they correct in stating that they do not apply because planting was not required in the lease agreements?